

FEATURED ARTICLE

The Effects of Personality, Affectivity, and Work Commitment on Motivation to Improve Work Through Learning

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This study examined the degree to which the dimensions from the Five-Factor Model of personality, affectivity, and work commitment (including work ethic, job involvement, affective commitment, and continuance commitment) influenced motivation to improve work through learning. Data were obtained from a nonrandom sample of 239 private-sector employees who were participants of in-house training programs. The hypothesized causal relationships were tested using structural equation modeling. Findings indicated that these dispositional effects were significant antecedents of motivation to improve work through learning. Specifically, 57 percent of the variance in motivation to improve work through learning was explained by positive affectivity, work commitment, and extraversion.

According to dispositional theorists, individuals possess relatively stable characteristics that affect their attitudes and behavior (Davis-Blake and Pfeffer, 1989). However, until recently, most of the research on job attitudes has been situational—referring, for example, to task characteristics, supervision, pay, working conditions, organizational structure, workspace characteristics, and promotional opportunities (compare Berger and Cummings, 1979; Fried and Ferris, 1987; Hackman and Oldham, 1980; Herzberg, 1966; Locke, 1976; Loher, Noe, Moeller, and Fitzgerald, 1985; Oldham and Fried, 1987). Little has been done to study dispositional traits in the context of organizational HRD. More specifically, there seem to be few empirical studies linking motivation in learning contexts with personality and other individual characteristics. Nor is there a model explaining dispositional influences on an employee's motivation to improve work through learning. A better understanding of these

differences and their impact on workplace learning would enable learning professionals to tailor training interventions more effectively and improve performance through learning.

Despite the limited number of such studies in HRD, dispositional research has led to the conclusion that there is a conceptual relationship between disposition and behavior. This dispositional research model, which is distinctly different from situational models, undergirds this study. It depicts the basic relationship between several constructs. Disposition as a variable of interest includes an individual's personality, which is made up of traits, affective (mood) structure, and values. Personality influences attitudes. Attitudes, in turn, affect motivation, which then leads to behavioral outcomes. In this model, situational factors do influence attitudes, motivation, and behavior, but they act in conjunction with dispositional factors.

Thus, the purpose of this study was to develop and test a model of dispositional effects on motivation. More specifically, the research model incorporated personality, affectivity, and work commitment as independent constructs and motivation to improve work through learning as the dependent construct. Structural equation modeling was used to analyze the research model.

Background of the Study

Evidence supporting the integration of personality, affectivity, work commitment, and motivation to improve work through learning constructs into a single research model came from a variety of research studies. This section briefly outlines some of the background literature.

Motivation to Improve Work Through Learning. Previous research efforts have focused on two types of motivation: motivation to learn or train and motivation to transfer (compare Clark, Dobbins, and Ladd, 1993; Noe, 1986; Noe and Schmidt, 1986; Hicks and Klimoski, 1987; Mathieu and Martineau, 1997; Mathieu, Tannenbaum, and Salas, 1992; Seyler, Holton, Bates, Burnett, and Carvalho, 1998; Warr and Bunce, 1995). However, if the desired outcome of organizational training programs is to improve work outcomes, then using motivation to learn or train as the dependent variable may be too limited. The process of improving work through learning also involves an employee's willingness to transfer the knowledge acquired to improve work processes. It is the combined motivational influences that will influence desired training outcomes. Thus, this study employs a relatively new construct: motivation to improve work through learning (MTIWL) (Baldwin, Ford, and Naquin, 2000; Naquin and Holton, 2001). This construct posits that an individual's MTIWL is a function of motivation to train *and* motivation to transfer. Further, it should more completely capture the motivational influences leading to improved work outcomes. Thus, the MTIWL is potentially a more powerful motivational construct because it incorporates both dimensions of motivation critical to achieving HRD outcomes.

Personality: The Five-Factor Model. According to the Five-Factor Model (FFM), there are five broad categories at the top of the personality trait hierarchy: neuroticism-emotional stability, extraversion, openness to experience, agreeableness, and conscientiousness (Costa and McCrae, 1992). Considerable research supports the relationship between personality and job performance variables, training efficiency, academic performance, and motivation (compare Barrick and Mount, 1991; Barrick, Stewart, Neubert, and Mount, 1998; Colquitt and Simmering, 1998; Costa and McCrae, 1995; Hogan, Rybicki, Motowidlo, and Borman, 1998; Salgado, 1997). Researchers have linked personality dimensions to a number of industrial and organizational topics, including absenteeism (Mowday, Porter, and Steers, 1982), employee reliability (Sackett and Harris, 1984), leadership (Ghiselli, 1971), organizational climate (Schneider, 1985), employee satisfaction (Staw and Ross, 1985), work motivation (Korman, 1976), and job scope. Kanfer (1990) strongly advocated the use of this model to advance the current body of motivational research.

Affect: Positive and Negative Affectivity. Affectivity is an emotion-based trait dimension (Watson, Clark, and Tellegen, 1988) that creates a cognitive bias through which individuals approach and understand experiences and may affect how they experience and evaluate jobs (Levin and Stokes, 1989). A prominent view of affectivity is that there are two independent dimensions of it: positive (PA) and negative (NA) (Costa and McCrae, 1980; Diener and Emmons, 1984; Watson, Clark, and Tellegen, 1988). PA is the tendency to experience positive emotional states, NA is the tendency to experience negative ones (Judge, Locke, and Durham, 1997; Watson and Clark, 1984).

PA levels have been shown to be associated with interpersonal relations and achievement (George and Brief, 1992; Tellegen, 1985), engagement (McFatter, 1994), learning speed (Masters, Barden, and Ford, 1979), expectations, estimates of past successes, and self-assessments (Wright and Mischel, 1982). Individuals with higher NA levels tend to have higher levels of anxiety, focus more on negative aspects of themselves and the world, and dwell on their mistakes, disappointments, and shortcomings (Levin and Stokes, 1989). Similarly, individuals scoring high on the neuroticism dimension are vulnerable to stress, prone to feeling inferior, self-conscious, and uncomfortable around others (Costa and McCrae, 1991). However, training programs are sometimes highly interactive, requiring high energy levels. Thus, voluntary participation in training initiatives and motivation to transfer among individuals who are highly neurotic or high in NA would be less likely because self-confidence and energy are required for successful completion of such programs.

The Role of Work Commitment. The suggestion that commitment plays a key role in training motivation is not new (see Facticeau, Dobbins, Russell, Ladd, and Kudisch, 1995; Noe, 1986; Tannenbaum, Mathieu, Salas, and Cannon-Bowers, 1991). Morrow (1983) surmised that work commitment is a function of personal characteristics, including dispositional qualities, and presents a facet design of work commitment that includes work ethic, career

commitment, organizational commitment (affective and continuance), and job involvement (Morrow, 1993). Because work commitment is likely to influence motivation in the workplace, her conceptualization of work commitment foci provided a starting point for this analysis. Based on research discussed in the following section, work commitment is hypothesized to mediate the relationship between some of the predictor variables and motivation to improve work through learning. Three constructs of Morrow's (1993) conceptualization—work ethic, organizational commitment, and job involvement—were employed. Career commitment was not used, because as Blau (1985) noted, career commitment is a particularly difficult construct to operationalize in heterogeneous groups because it means different things to different employee groups.

Work Ethic. Work ethic, also called the Protestant work ethic (PWE), has been defined for “an individual as a value or belief concerning the place of work in one's life that either (a) serves as a conscious guide to conduct or (b) is simply implied in manifested attitudes and behavior” (Siegel, 1983, p. 28). According to Weber's classic conceptualization of PWE, which stemmed from Calvinistic and Quaker philosophies of individualism and asceticism (Macoby, 1983), work is “performed as if it were an end in itself, a calling” (Weber, 1958, p. 62). Individuals with a strong work ethic are committed to the values of hard work and embrace the Calvinistic tradition of frugality, hard work, conservatism, and success (Weber, 1958). However, the culture today does not necessarily support the same conventions and values as in earlier days. Work values constantly change and evolve, so the notion that the work values of 1958 would not be applicable today is consistent with historical trends. A redefinition of work values has occurred. Bernstein describes contemporary employees as “inner-directed,” people “who clearly place their personal wants and aspirations above those of their employers” (1997, p. 221). Work schedules and business priorities are secondary to self-fulfillment (Sinetar, 1980). So although the values of previous generations may have been deeply rooted in nonleisure as the norm, this is not the case in American society today. In light of the prevailing values, cultures, and mores, it is possible for an individual to score high on the hard work scale but low on nonleisure, asceticism, or independence. Compliance with the norms and values of today's society could lead an individual to respond to the PWE instrument in a manner that would contradict the PWE construct, which requires high scores on all four facets: hard work, asceticism, independence, and nonleisure. Hard work appears to be the only component of PWE that is applicable in today's society (see Naquin and Holton, 2001).

Organizational Commitment. Recent research efforts have focused on three types of commitment: affective, continuance, and normative commitment (Allen and Meyer, 1990; Meyer and Allen, 1984). Allen and Meyer defined affective commitment as an “emotional attachment to the

organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization" (1990, p. 2). Continuance commitment is based on "the individual's recognition of the costs (or lost side bets) associated with discontinuing the activity" (Allen and Meyer, 1990, p. 33). Normative commitment, however, is not included in Morrow's (1993) work commitment conceptualization, one of the foundational premises of the present study, and was thus excluded from it.

Job Involvement. Lodahl and Kejner (1965) defined job involvement as the degree of daily absorption a worker experiences in work activity. Job involvement leads individuals to exceed the normal job expectations (Moorhead and Griffin, 1995) and is a key component in employee motivation (Lawler, 1986). Brown (1996) confirmed a relationship between job involvement and work ethic endorsement with growth need strength, a facet of conscientiousness, concluding that motivation may be both an antecedent and an outcome of job involvement. Clark (1990) found a positive relationship between training motivation and job involvement, and Hensey (1987) found that the effectiveness of training programs suffered among workers who were less involved with their jobs.

The Research Model. Based on the research briefly discussed, the research model shown in Figure 1 was developed. It shows the indicator variables (discussed in the next section), latent variables, and hypothesized structural relationships. It should be noted that this model does not capture *all* influences on MTIWL; situational effects are excluded. Rather, it hypothesizes what are believed to be key dispositional influences on MTIWL.

Method

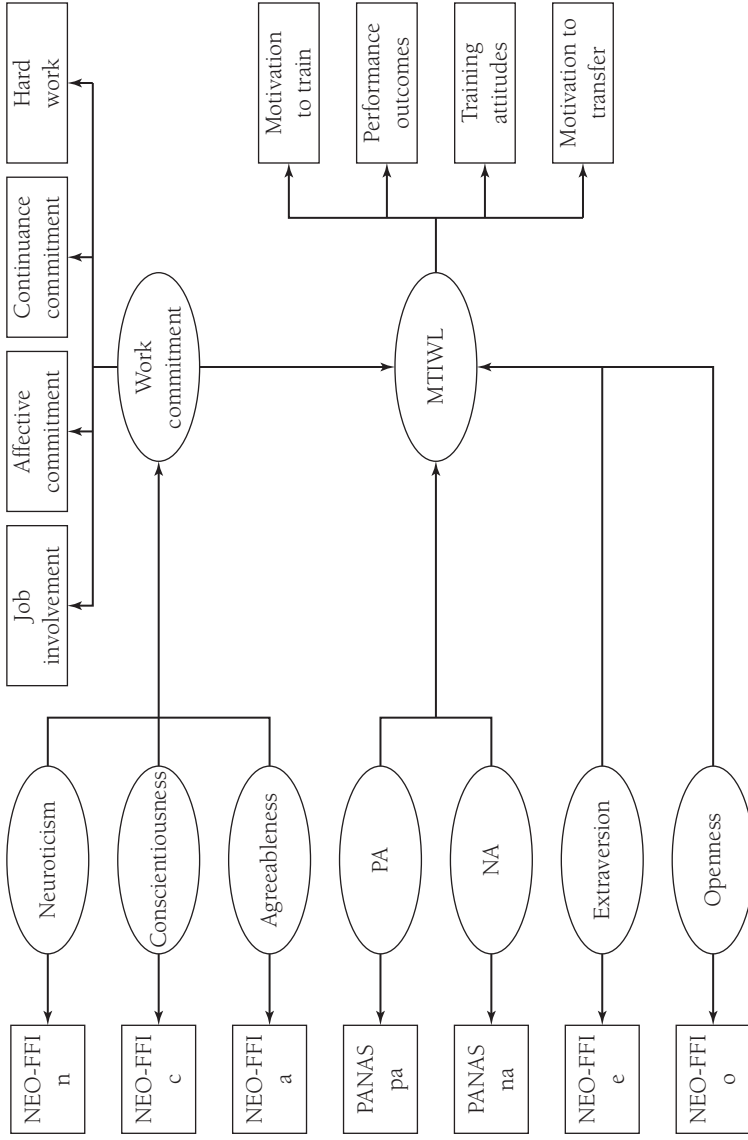
This section describes the method used in this study.

Sample. Data were obtained from a nonrandom sample of 247 subjects from a single private-sector health insurance organization. Listwise deletion for missing data resulted in a usable sample size of 239. Respondents were participants of in-house training programs and represented a wide range of years of work experience and a wide range of job levels. Respondents' average age was 35.5 years (overall age range was 19 to 68; SD was 10.516), 28.5 percent, or 68 of the respondents, were male and 71.5 percent, or 171, were female.

Procedure. Surveys were administered to respondents at the beginning of in-house training programs. Participants were required to attend these classes, and questionnaires were presented as part of the training program. Participants were allowed to withdraw if they had objections to the study, but none objected.

Instrumentation. In structural equation modeling, unidimensional latent constructs are routinely represented by multiple scales, called indicator variables. Thus, to measure MTIWL, scales measuring both an individual's motivation to train *and* motivation to transfer were necessary. Because it is

Figure 1. Dispositional Model of MTIWL with All Indicator Variables



desirable to have at least three indicators for latent constructs, four scales were selected to measure the motivation to improve work through learning construct. Two seven-item scales from the Strategic Assessment of Readiness for Training (START) instrument (Weinstein and others, 1994) were selected: training attitudes and the motivation to train scale. In this study, coefficient alpha reliabilities were .70 for both scales. The Learning Transfer Systems Inventory (LTSI) (Holton, Bates, and Ruona, 2000), a sixty-eight-item instrument, measures factors affecting learning transfer, including motivation. The motivation to transfer scale ($\alpha = .83$) and performance outcomes expectations ($\alpha = .83$) scale were selected. Drawing on expectancy theory, the second scale was selected to include an outcome component of improving work through motivation. In this study, coefficient alpha reliabilities were .85 for motivation to transfer and .78 for performance outcome expectations.

The NEO Five-Factor Inventory (NEO-FFI), a sixty-item measure of personality (Costa and McCrae, 1992), measured personality dimensions. Raw scores were converted to *t* score values using gender-based national norms (Costa and McCrae, 1991). Internal reliabilities for the NEO-FFI have been reported as .86, .77, .73, .68, and .81 for neuroticism-emotional stability, extraversion, openness, agreeableness, and conscientiousness, respectively (Costa and McCrae, 1991).

The most widely used measure of PA and NA is the twenty-item Positive and Negative Affectivity Schedule (PANAS) (Watson, Clark, and Tellegen, 1988). Subjects rate PA and NA according to their "general" or "average" feelings, in order to assess trait affectivity rather than state affectivity. Watson, Clark, and Tellegen reported internal consistency reliabilities for PA as .87 and for NA as .88.

Blau and Ryan (1997) revealed a four-dimension construct—hard work, nonleisure, asceticism, and independence—measured by an eighteen-item secular work ethic instrument. It was selected because it appeared to contain the most valid items empirically derived from seven different instruments. As discussed earlier, only the hard work scale was used in this study. Coefficient alpha reliability for hard work was .78.

Kanungo (1982) proposed a ten-item job involvement measure with items derived from Lodahl and Kejner (1965), but it is psychometrically stronger than the other scales (Blau, 1997) so it was selected for this study. Coefficient alpha reliability was .71.

Because of its multidimensional structure, the Allen and Meyer (1990) instrument is increasingly being used to measure organizational commitment. This instrument consists of three eight-item scales: affective, continuance, and normative commitment. The affective and continuance commitment scales from this instrument were selected for use in this study. Coefficient alpha reliabilities were .84 for affective commitment and .81 for continuance commitment in this study.

Analysis. Structural equation model analysis was conducted with LISREL 8.3 (Joreskog and Sorbom, 1996) to test the causal relationships between variables in the hypothesized model. Input for estimation of the model was provided by a covariance matrix prepared with PRELIS 2.3. Data analysis was conducted in two stages in accordance with a procedure suggested by Anderson and Gerbing (1988) and Hair, Anderson, Tatham, and Black (1998). In the first stage, the adequacy of the measurement model was examined. The initial analyses evaluated the loading of individual instrument items on instrument scales being used as indicator variables. Scale scores were calculated and used as indicators for the latent constructs. A second analysis evaluated the fit of the measurement model made up of the scale scores and latent constructs.

Because the NEO and PANAS scales are so well established, these scales were not included in this stage of analysis. Their established validity allowed for the treatment of each of these scales as a single indicator for a corresponding latent construct. As is common practice with single indicators, the error variance was set to one, minus the reliability of the scale, times the variance of the scale (Hair, Anderson, Tatham, and Black, 1998). For the NEO-FFI, the variance and reliability were obtained from the technical manual (Costa and McCrae, 1992), whereas the values used for the PANAS were calculated from this sample.

The second step of the analysis required assessment of the structural model describing the relationships among the latent constructs (Anderson and Gerbing, 1988). Like the evaluation process for the measurement model, structural model assessment involves examination of multiple fit indices. (For an explanation of fit indices, see Hair, Anderson, Tatham, and Black, 1998.) In addition, parameter estimates for each path and the statistical significance were examined during this stage.

It is increasingly common for researchers to develop and evaluate alternative models rather than simply examine the absolute fit of the hypothesized model. Thus, at each step of the analysis the model was carefully examined for possible modifications as well as overall fit. Each change suggested by weak factor loadings, nonsignificant paths, or modification indices was carefully evaluated for alternative theoretical support.

Results

This section presents the study's results.

Measurement Model Analysis. The first stage of the measurement model analysis was to examine the loadings of instrument items on each scale except for the NEO-FFI and the PANAS. For space reasons this step will not be discussed in detail, but full details are available from the authors.¹ Briefly, confirmatory factor analyses of scales led to deletion of only a few instrument items. Resulting fit measures were considered adequate. Scale scores were then calculated using the slightly revised scales.

The second stage tested the loading of the scales on the designated latent constructs. In this model, there were two constructs with multiple indicators: work commitment and MTIWL. The initial fit for the model (see Figure 1) was acceptable ($\chi^2_{(61)} = 163.62$, GFI = .92; AGFI = .83; NFI = .85; RMSEA = .084; SRMR = .064; CFI = .89). All paths were significant, so none were eliminated. Thus, in the final measurement model four indicator variables were retained for the dependent construct MTIWL and four were retained for work commitment. Table 1 shows the correlation matrix for all scales.

Structural Model Analysis. The fit for the initial structural model (see Figure 2) was not as strong as desired ($\chi^2_{(68)} = 169.88$, GFI = .91; AGFI = .85; NFI = .84; RMSEA = .079; SRMR = .072; CFI = .89). Several paths were also nonsignificant ($t < 1.96$), including from openness to motivation to improve work through learning ($t = -.80$); from neuroticism to WCATT ($t = .19$); from NA to MTIWL ($t = 1.07$); and from extraversion to MTIWL ($t = 1.38$). It was decided that three of the nonsignificant paths should be eliminated. The path from extraversion to MTIWL was retained due to theoretical support and previous research findings. Analysis of this model indicated slightly improved fit ($\chi^2_{(47)} = 108.06$, GFI = .93, AGFI = .88, NFI = .86, RMSEA = .074, SRMR = .072, CFI = .91).

Figure 2 shows the final path model with standardized path coefficients. Parameter estimates indicated that all but one path was statistically significant. The t values ranged from 1.20 to 4.85. Although the path from extraversion to MTIWL was not statistically significant ($t = 1.20$), it was retained because of research findings indicating its importance (Barrick and Mount, 1991). In addition, deletion of this path did not result in a significant improvement in the model fit. The remaining five paths were statistically significant ($t > 1.96$).

Table 2 summarizes the effect size statistics and t values. Conscientiousness and agreeableness explained 53 percent of the variance in work commitment. Work commitment, extraversion, and PA explained 57 percent of the variance in MTIWL. The standardized coefficients for the total effects on MTIWL show that PA had the strongest influence ($\beta = .44$), whereas conscientiousness had the second strongest influence ($\beta = .21$) even though it occurred indirectly through work commitment. Extraversion ($\beta = .10$) and agreeableness ($\beta = .10$) had smaller effects, with agreeableness also operating through work commitment. Conscientiousness had the strongest influence on work commitment ($\beta = .54$), twice that of agreeableness ($\beta = .27$).

Discussion

MTIWL is a new construct devised to assess individuals' motivation to train and their motivation to transfer knowledge or skills acquired through training initiatives to work settings. This is the first known use of this construct. Confirmatory factor analysis showed that the four scales selected loaded on this latent construct. The squared multiple correlations for all scales were good

Table 1. Correlation Matrix

<i>Independent Variables</i>	1	2	3	4	5	6	7	8	9	10	11	
1 Neuroticism	—											
2 Extraversion	-.16*											
3 Openness	-.05	.48**										
4 Agreeableness	.25**	.40**	.34**									
5 Conscientiousness	-.24**	.33**	.32**	.42**								
6 Job involvement	-.05	.20**	.30**	.27**	.37**							
7 Affective commitment	-.25**	.26**	.15*	.28**	.43**	.55**						
8 Continuance commitment	.14*	-.29*	-.29**	-.13	-.13	-.14*	-.06					
9 Negative affectivity	.48**	-.16*	-.01	-.31**	-.18**	-.02	-.19**	.16*				
10 Positive affectivity	-.40**	.47**	.35**	.37**	.46**	.19**	.31**	-.19**	-.37**			
11 Hard work	-.04	.23**	.23**	.25**	.36**	.22**	.27**	.01	-.04	.34**		
12 Motivation to transfer	-.14*	.37**	.31**	.27**	.30**	.24**	.33**	-.14*	-.18**	.47**	.42**	
13 Performance outcome expectations	-.17**	.32**	.19**	.30**	.30**	.34**	.44**	-.23**	-.19**	.46**	.40**	
14 Attitudes toward training	-.21**	.24**	.20**	.24**	.31**	.24**	.29**	-.15*	-.17**	.43**	.26	
15 Motivation to train	-.16*	.27**	.20**	.20	.26**	.05	.18**	-.12	-.24	.43**	.25**	
											.48**	
												.51**

Note: *correlation is significant at the .05 level; **correlation is significant at the .01 level.

Figure 2. Final Model with Standardized Path Coefficients and *t* Values

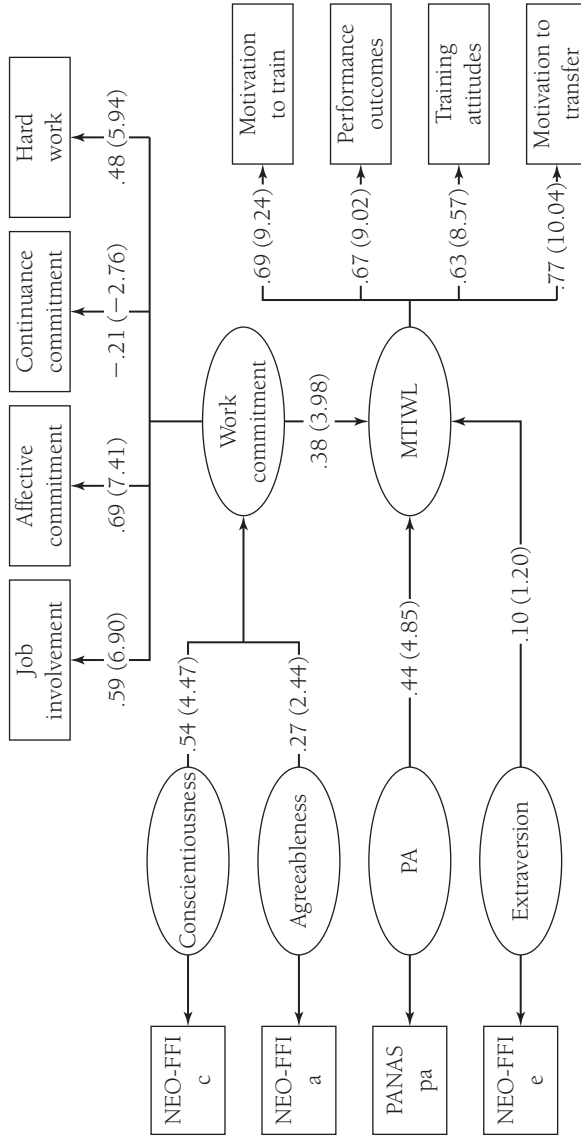


Table 2. *t* Values and Regression Equations for Final Model

<i>t</i> Values		
<i>Path</i>	<i>t</i> Value	
Conscientiousness to work commitment	4.47	
Agreeableness to work commitment	2.41	
Extraversion to MTIWL	1.20	
PA to MTIWL	4.85	
Work commitment to MTIWL	4.02	
<i>Regression Equations</i>		
WC = 0.54*NEOCONSC + 0.27*NEOAGREE, Errorvar. = 0.47, $R^2 = 0.53$		
(0.12)	(0.11)	
4.47	2.44	
MTIWL = 0.38*WC + 0.10*NEOEXTRA + 0.44*PA, Errorvar. = 0.43, $R^2 = 0.57$		
(0.09)	(0.08)	(0.09)
4.02	1.20	4.85
<i>Effect Size Coefficients for Exogenous Variables and MTIWL (Standardized Total Effects)</i>		
PA	.44	
Conscientiousness	.21	
Extraversion	.10	
Agreeableness	.10	

(motivation to transfer = .60; motivation to train = .48; performance outcome expectations = .45; attitudes toward training = .40). Each of the separate scales selected had evidence of initial content construct validity from previous studies.

Four of the dispositional traits assessed in this study were found to be antecedents of MTIWL, two directly and two indirectly through work commitment. Extraversion and PA directly and positively influenced MTIWL, whereas the effects of conscientiousness and agreeableness were mediated by work commitment, which positively influenced the dependent construct. More specifically, 57 percent of the variance in MTIWL was explained by PA, work commitment, and extraversion, whereas 53 percent of the variance in the mediator construct, work commitment, was explained by conscientiousness and agreeableness. This indicates that these dispositional effects are, in fact, important considerations in predicting MTIWL.

The significance of the path from PA to MTIWL, the strongest path found in this study, supports previous research. George and Brief (1992) found that achievement motivation, which is closely related to motivation, is associated with PA. They later proposed a theory in which PA influences proximal and distal motivation (George and Brief, 1996). The engagement component of PA (McFatter, 1994) also seems to be directly associated with motivation.

Individuals scoring high on the PA scale would be more likely to become engaged in the training program, thereby increasing the likelihood of their success in the program and subsequent transfer of training.

Wright and Mischel's (1982) findings—relating to heightened expectations, greater estimates of past successes, and more favorable self-assessments among individuals with high PA—supports a direct link between PA and MTIWL. Individuals with high PA, like highly extraverted individuals, may be more optimistic about training and have a stronger belief in their ability to complete it successfully. They may also have more confidence in their ability to improve work situations as a result of the knowledge and skills they acquire through training. Their optimism and positive self-assessments may also make them feel more empowered to effect change in their job performance.

Conscientiousness was the second strongest predictor, mediated by work commitment. Findings of this study on conscientiousness are consistent with previous research that suggests a relationship between this personality dimension and work commitment. Conscientiousness, according to Costa and McCrae (1991), comprises facets such as competence, order, dutifulness, achievement striving, self-discipline, and deliberation. These descriptors are similar to those of the work ethic component of work commitment, which includes an orientation toward hard work and achievement, dependability, and persistence (Weber, 1958). Conscientiousness has also been found to be associated with volitional variables such as hard work, perseverance, and achievement orientation (Costa and McCrae, 1988a, 1988b; Digman and Takemoto-Chock, 1981; Peabody and Goldberg, 1989), which are aspects of work commitment.

These findings also support conscientiousness studies that are more closely related to training-learning and motivation. For instance, studies in educational settings have reported correlations between conscientiousness and educational achievement (Digman and Takemoto-Chock, 1981; Smith, 1967) and vocational achievement (Takemoto, 1979) in the .50 to .60 range (Barrick and Mount, 1991). Barrick and Mount (1991) found conscientiousness to be a significant predictor of training proficiency ($r = .23$) across all occupational groups studied. In addition, Mathieu and Martineau (1997) and Mathieu, Martineau, and Tannenbaum (1993) found that achievement motivation (a facet of conscientiousness) positively influenced training motivation. Finally, Colquitt and Simmering (1998) found a positive correlation between motivation to learn and conscientiousness.

The next strongest predictor in the model was agreeableness. However, the relationship between agreeableness and work commitment found in this study provides new information on this personality dimension because no other studies were located that directly tested this relationship. An important characteristic of individuals scoring high in agreeableness is willingness to assist others (Costa and McCrae, 1991). When applied to employment situations,

the parallel to willingness to assist others may be that these individuals are willing to assist the organization by improving work; thus, they would be more committed to work.

Extraversion had the same effect size as agreeableness, even though the path from extraversion to motivation was nonsignificant. Because prior theory and research supported its influence on training outcomes, it was retained in the model. Further research is needed to determine if it is, in fact, a significant predictor. Logically, it would seem to be, because extraverts, somewhat like individuals with high PA, tend to be optimistic, energetic, enthusiastic, and actively seek both interpersonal relations and achievement (George and Brief, 1992). Each of these characteristics is an important component of motivation and motivation to improve work through learning. These individuals may perceive training events as enjoyable and may feel that successful completion of the training program is likely and that they can effect change or improve their work with the information and skills they acquire.

Somewhat unexpectedly, openness to experience was not a significant predictor of the dependent variable, nor did it significantly influence work commitment. In some ways, this contradicts previous research. For instance, Barrick and Mount (1991) found openness correlated with training proficiency ($r = .25$). Others (Driskell, Hogan, Salas, and Hoskin, 1994; Gough, 1987; McCrae, Costa, and Piedmont, 1992; Salgado, 1997) have also found a positive relationship between openness to experience and learning. One explanation may lie in the fact that the MTIWL construct included a transfer and performance outcome component, unlike the more frequently assessed motivation to learn construct. One facet of the openness to experience personality dimension is intellectual curiosity, which often translates to "an active pursuit of intellectual interests for their own sake" (Costa and McCrae, 1991, p. 17). Because the dependent construct was more work-focused than just learning for the sake of learning, it may have created an outcome orientation element within the construct rather than just a learning orientation.

Others have explored a related dispositional variable, goal orientation, which refers to whether individuals view training situations as learning opportunities (mastery orientation) or opportunities to achieve their goals (goal orientation) (Colquitt and Simmering, 1998; Mathieu and Martineau, 1997). Had the dependent variable been more learning-oriented (that is, learning for the sake of learning) as opposed to being outcome-oriented (geared toward the application of the training knowledge and skills attained), openness to experience might have remained in the model.

The finding that neuroticism and NA were not related to MTIWL is somewhat surprising. Although there was limited research directly linking these constructs to training, the characteristics of individuals scoring high on these scales would seem to suggest they would influence motivation. The fact that they did not further supports George and Brief's (1992, 1996) contention that PA would be the strongest predictor.

Implications

The findings suggest that motivation is significantly affected by dispositional factors. Organizations whose performance depends on their employees' willingness to learn continually and use their learning to make changes in the workplace must be concerned with the dispositional profile of those employees. Therefore, organizations must be prepared to respond to the motivation of current and potential employees. These findings suggest that each individual has a dispositionally affected motivational profile for improving work through learning based on four factors: PA, conscientiousness, extraversion, and agreeableness. Leadership research indicates that the trait approach facilitates the selection of leaders. It is applicable here as well. Viewed from a selection perspective, organizations can determine the desired employee profile to meet their needs. From a humanistic perspective, employers must consider how to work with individuals who are not predisposed to be motivated to improve work through learning. Careful consideration must be given to what motivates employees who do not fit the profile found to be significant in this study. The large contribution of these dispositional characteristics in predicting motivation to improve work through learning suggests that HRD professionals should attend more closely to the motivational levels of employees who score low on these dispositional dimensions and develop and implement interventions to heighten their pretraining motivation. Knowledge of the dispositional profiles of employees, coupled with an awareness of the optimum motivational profile, should enable employers to accomplish this task more easily.

There are, of course, ethical issues for organizations to consider as they become aware of the dispositional profile of both employees and candidates for employment. For instance, the accuracy of the information is at risk if self-ratings alone are relied on. Decisions made on the basis of inaccurate information could potentially negatively affect the employee or the organization or both. And disclosure of such information, either inside or outside of the organization—whether the information is accurate or not—brings up the issue of the employee's right to privacy. Similarly, an organization's ability to control employee behavior through such knowledge could also present an ethical challenge. Despite these risks and ethical dilemmas, the ability to enhance employee and organizational effectiveness through interventions developed with this knowledge warrants consideration of employee dispositional profiles.

Dispositional characteristics have not been emphasized in previous HRD studies, which have tended to rely more heavily on situational variables. (As Figure 1 indicates, situational factors do influence attitudes, motivation, and behavior, but they act in conjunction with dispositional factors.) However, these findings highlight the need for HRD researchers to include dispositional and individual difference factors in more research efforts. Because the effects

of dispositions were so powerful, models of training in the workplace should control for them. Failure to include dispositional effects in such models may result in an overestimation of situational effects and could lead organizational researchers down the wrong path in their attempts to enhance training outcomes.

Further research should aim at expanding or refining the dependent construct as well. Because this is the first known study to examine MTIWL, it should be tested on other sample populations, both in single organizations and across several organizations. Other scales should also be investigated to see if they should be considered as possible indicators of this construct. Researchers should also examine the convergent and divergent validity of the construct with other variables in its nomological net, or use only attitudes toward training and motivation to train scales to determine if the same results are observed. Finally, researchers should examine its criterion validity by examining the relationship between this construct and performance.

Several possible limitations of this research should be mentioned. First, because the study is based on self-report data and the surveys were administered at the beginning of in-house training programs, there is the possibility of common method variance, although examination of the correlation matrix suggests this is not a significant problem. For example, correlations between the predictor variables and motivation to train ranged from $-.24$ to $.48$, and with motivation to transfer they ranged from $-.18$ to $.47$. Second, data for this study came from a nonrandom sample, thereby limiting the generalizability of the findings. Respondents worked for a single company and there was an overrepresentation of females (that is, only 28.5 percent of respondents were male). Third, a nonexperimental cross-sectional research design was used in this study. Caution is necessary when using even the most sophisticated statistical techniques available for making causal inferences. Nevertheless, the theoretical underpinnings of the model development and testing provide credibility for the study's results. Fourth, even though respondents were assured of anonymity and confidentiality, an element of social desirability could be present in the data. Attempts were made, however, to ameliorate these effects by providing a script of instructions and an assurance of confidentiality. Fifth, research in this area is clearly in its exploratory phases, so the theoretical foundations and causal models need further work. In particular, the model modifications made in this study will clearly need cross-validation. Despite these limitations, this research makes valuable contributions in applying existing theory and research methods to a new construct domain.

Note

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